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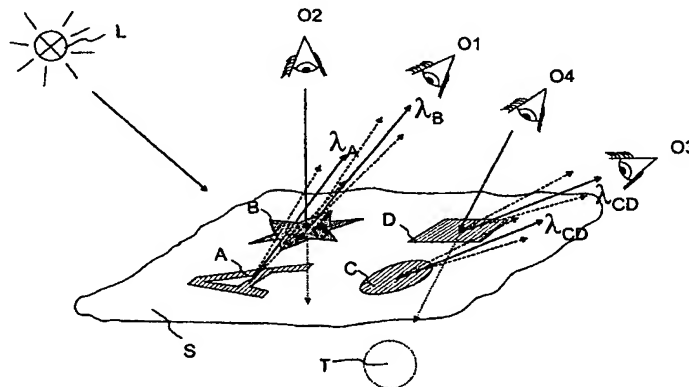
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[Continued on next page]

(54) Title: VISUAL EFFECT BASED ON A MICRO-OPTICAL GRID STRUCTURE



(57) Abstract: The invention relates to a micro-optical grid structure (G) formed on a substrate (S) that is preferably produces as a surface grid structure. The invention also relates to a method for producing said grid structure. Furthermore, the invention relates to a product that comprises one or several pattern areas (A, B, C, D), which single pattern areas are formed by means of the grid structure according to the invention. According to the invention the grid structure (G) is arranged to produce for a viewer a holographic or corresponding visual effect based on the diffraction of light by directing the light diffracted from the grid structure and corresponding to the design wavelength ( $\lambda$ ) substantially to only a few diffraction orders (m). Single diffraction order thus corresponds to a certain observing direction of the visual effect observed on said design wavelength. According to the invention the grid structure is arranged to leave a free range of angles between adjacent observing directions, such that the grid structure (G) being examined from directions corresponding to said range of angles does not produce for the viewer a clearly observable effect based on diffraction, said grid structure being thus substantially transparent. The invention is suitable for producing visual effects that are transparent in the above-described way but at the same time clearly visible in the observing directions for example on the substrates transparent as such.



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## A. CLASSIFICATION OF SUBJECT MATTER

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## B. FIELDS SEARCHED

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5142384 A (WOOD, G.P. ET AL), 25 August 1992 (25.08.1992), column 1, line 52 - column 2, line 5; column 2, line 62 - column 3, line 15, claim 1 --	1-28
A	EP 0930549 A1 (HOLTRONIC TECHNOLOGIES LIMITED), 21 July 1999 (21.07.1999), see the whole document --	1-28
A	US 5625619 A (TODA, T. ET AL), 29 April 1997 (29.04.1997), see the whole document -- -----	1-28



Further documents are listed in the continuation of Box C.



See patent family annex.

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"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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US	5142384	A	25/08/1992	EP	0403134	A	19/12/1990
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